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09/843,452	04/26/2001	Michael J. Narayan	MFCP.81824	8292

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EXAMINER

CHANKONG, DOHM

ART UNIT PAPER NUMBER

2152

DATE MAILED: 02/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/843,452

Applicant(s)

NARAYAN ET AL.

Examiner

Dohm Chankong

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1, 2, 6-8, 11, 12, 19, 21-23, 25 and 27-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 6-8, 11, 12, 19, 21-23, 25 and 27-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                    | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____  |

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### DETAILED ACTION

1> This action is in response to Applicant's amendment and arguments, filed 11.9.2005. Claims 3-5, 20, 24 and 26 are cancelled. Claims 27-32 have been added. Claims 1, 2, 6-8, 11, 12, 19, 21-23, 25 and 27-32 are presented for further examination.

2> This is a final rejection.

### *Response to Arguments*

3> Applicant's arguments with respect to 1-7 and 19-22 have been fully considered but they are not persuasive. Applicant has amended claims 1, 6 and 7 with new limitations. These new limitations fail to distinguish Applicant's claimed invention over the Badovinatz and Harriman references for reasons set forth in the following rejections.

4> Applicant's arguments with respect to claims 8, 11, 12 and 23-26 have been considered but are moot in view of the new ground(s) of rejection necessitated by Applicant's amendment of the claims; the addition of the limitation that the operation order is processed in the order that the assigned unique version number is within a sequence of version numbers requires a new prior art search.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5> Claims 1, 2, 6-8, 11, 12, 19, 21-23, 25 and 27-32 are rejected under 35 U.S.C § 103(a) as being unpatentable over Badovintz et al, U.S Patent No. 5,793,962 ["Badovintz"], in view of Harriman et al, U.S Patent No. 6,226,687 ["Harriman"].

6> As to claim 1, Badovintz discloses a method for use in a computer system, operating in a peer-to-peer environment having a host peer and at least one non-host peer, and for ordering operation requests of the peers, the operation requests being one of a provided list of recognized operations which may be requested, comprising:

receiving, by the host peer, a first operation request from the provided list of recognized operations [column 1 «line 58» to column 2 «line 4» where : Badovintz's group leader corresponds to a host peer, and operations such as join and leave correspond to list of recognized operations. Badovintz does not explicitly disclose a peer system but his group cluster is interpreted as Examiner as comparable to a peer environment];

subsequently receiving, by the host peer, a second operation request from the provided list of recognized operations [column 5 «lines 39-49» | column 8 «lines 18-30»]; and

creating an operation order, the operation order being from the provided list of recognized operations and being associated with at least one of the first operation

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request and the second operation request [column 7 «lines 35-53» where : the group leader receives commands from the other group members. From these commands her submits a multicast command to all group members, the multicast command associated with the commands that the group leader receives from the other group members].

Badovinatx does not explicitly disclose the host peer assigning a first unique version number to the first operation request or a second unique version number to the second operation request, the second unique version number indicating a later receipt time than the first unique version number, such that the host peer evaluates relative arrival times of the first operation request and the second operation request based on the first unique version number and the second unique version number, that a third unique version number is assigned to the operation order, or that the unique version numbers are generated from an indicator that increments version numbers.

7> Badovinatx is directed towards a system that facilitates communication and synchronization between members of a group [column 4 «lines 30-34» | column 12 «lines 61-65»]. In achieving this goal, Badovinatx's invention utilizes a group leader (host peer) that receives operation requests or commands from the other members of the group whereby the group leader sends a multicast command to the other members of the group. This multicast command essentially notifies the members of the group of the actions of the other members, thereby achieving the desired synchronization.

It should be noted that Badovinatx discloses that the host peer of the group utilizes a queue when receiving multiple operations requests from other peers

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[column 11 «lines 11-25»]. To one of ordinary skill in the art, a queue is essentially a structure that stores incoming|outgoing messages in a sequential fashion, and in Badovinat's system, the queue would store incoming operations from other peers. This is further suggested by Badovinat's use of the sequence numbers for outgoing operations that enables a host peer to maintain message consistency between all members within the cluster [column 8 «lines 23-30»].

In light of this, Harriman is utilized to disclose assigning sequential numbers to received packets, storing the packets in a work queue and, processing the packets based on the order of the sequential numbers, the sequential numbers generated from an indicator that increments version numbers [Figure 1 | column 2 «line 64» to column 3 «line 7» | column 3 «lines 31-41» where Harriman's use of the sequence number of the most recent packet corresponds to applicant's claimed "indicator"]. Harriman also discloses assigning sequence numbers to outgoing packets [column 4 «lines 47-52»]. Harriman's disclosure keeps in line with Badovinat's use of sequence numbers for outgoing messages and would further enhance the Badovinat's host peer's ability to handle and process multiple operations from its peers. Therefore, this combination corresponds to Applicant's claimed host peer assigning version numbers to operation requests, and evaluating the relative arrival times of the first and second operation requests based on the unique version numbers and generating the version numbers for each of Badovinat's incoming (to the group leader) and outgoing (from the group leader to the group members) messages from an indicator that increments version numbers.

The operation order (Badovinat's group leader multicast command) being assigned a third unique version number is implied by Badovinat's disclosure that all messages transmitted by the group leader are assigned a sequence number.

It would have been obvious to one of ordinary skill in the art to incorporate the functionality of sequence numbers for incoming operation requests from group members into Badovinat's group leader's message queue. Harriman teaches that the use of the sequence numbers enables a system to check if the next packet (message) in the queue is the proper packet to be processed. Such functionality is well known in the art and would be beneficial for providing a layer of fault tolerance in Badovinat's messaging system, enabling the group leader to process the proper message.

8> As to claim 2, Badovinat discloses processing the operation requests in the order received in the queue [column 11 «lines 11-25»] but does not disclose processing in order of the assigned version number.

9> Harriman discloses processing packets from a queue in the order of assigned version number [Figure 1 | column 2 «lines 64» to column 3 «line 7»]. As mentioned previously, it would have been obvious to one of ordinary skill in the art to incorporate the functionality of sequence numbers into Badovinat's message queue. Harriman teaches that the use of the sequence numbers enables a system to check if the next packet (message) in the queue is the proper packet to be processed. Such functionality is well known in the art and is beneficial for providing a layer of fault tolerance in Badovinat's messaging system.

10> As to claims 6 and 7 as they merely variations (computer readable medium and system) on the implementation of the steps of the method of claim 1, they do not teach or further define over the claimed limitations. Therefore, these claims are similarly rejected for reasons set forth for claim 1.

11> As to claim 8, Badovinatze discloses a method for use in a computer system, operating in a peer-to-peer environment having a host peer and at least one non-host peer, and for requesting operations of the host peer, the operations being one of a provided list of recognized operations which may be requested, comprising:

sending, by the at least one non-host peer, at least one operation request from the provided list of recognized operations to the host peer [column 7 «lines 35-67» : for example, the insert and leave requests];

receiving, by the at least one non-host peer, an operation order and a first assigned unique version number associated with the operation request [column 7 «lines 41-46 and 59-65» | column 8 «lines 23-30»].

Badovinatze discloses determining whether the assigned version number received is the next in a sequence of version numbers processed by the at least one non-host peer [column 8 «lines 23-30»] but does not explicitly disclose queuing the operation order until the first assigned unique version number is next in the sequence of version numbers processed by the at least one non-host peer if the next version number is not the next in a sequence. Badovinatze also does not explicitly disclose



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processing, by the receiving peer, the operation order in the order that the first assigned unique version number is in within the sequence of version numbers.

12> Harriman discloses queuing the operation order until the first assigned unique version number is next in the sequence of version numbers processed by the at least one non-host peer if the next version number is not the next in a sequence and processing, by the receiving peer, the operation order in the order that the first assigned unique version number is in within the sequence of version numbers [column 3 «lines 31-41» | column 4 «lines 21-52»].

As Badovinat兹 discloses using sequence numbers for the same purpose as Harriman, it would have been obvious to one of ordinary skill in the art to modify Badovinat兹 by incorporating Harriman's trapping functionality into his queue and to process operations in order of the assigned sequence number in order to maintain order of the messages when processing them [see Harriman, column 2 «lines 11-14»].

13> As to claims 11 and 12 as they merely variations (computer readable medium and system) on the implementation of the steps of the method of claim 8, they do not teach or further define over the claimed limitations. Therefore, these claims are similarly rejected for reasons set forth for claim 8.

14> As to claim 19, Badovinat兹 discloses the method of claim 1, further comprising assigning, by the host peer, a fourth unique version number to at least one non-host peer, the fourth unique version number indicating when the at least one non-host peer

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joined a session and is used to determine a subsequent host peer [column 12 «lines 51-56» : “provider identifier” coupled with the membership list are used by members to determine the time when other members have joined the group, the group corresponding to Applicant’s claimed “session”. The provider identifier and the membership list determine the next group leader based on when they joined the group session].

15> As to claims 21 and 22, as they do not teach or further define over the previously claimed limitations, they are similarly rejected for reasons set forth for claim 19, supra.

16> As to claim 23, Badovinatz discloses the method of claim 8, further comprising receiving, by the non-host peer, a second assigned version number, the second assigned unique version number indicating when the non-host peer joined a session and is used to determine a subsequent host peer [column 12 «lines 51-56» : “provider identifier” and membership list are used by the members to determine who can be the next group leader].

17> As to claim 25, it does not teach or further define over the previously claimed limitations, it is similarly rejected for reasons set forth for claim 23, supra.

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18> As to claims 2-29, as they do not teach or further define over the previously claimed limitations, they are similarly rejected for at least the same reasons set forth for claim 1 [see ¶7].

19> As to claims 30-32, Badovinatze discloses incrementing the version numbers for every operation order created [column 8 «lines 23-30»: messages assigned sequence numbers, 43, 44 and 45] but does not expressly disclose incrementing the version number for every operation request.

20> Harriman discloses incrementing the version number for every operation request [column 3 «lines 45-50»]. It would have been obvious to one of ordinary skill in the art to modify Badovinatze to incorporate Harriman's teachings for incrementing the version numbers for every received operation request. Their combination would further enhance Badovinatze's goal of facilitating group member synchronization by enabling the group leader to better maintain the order of incoming requests from other group members [see Harriman, column 5 «lines 11-35»].

### *Conclusion*

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

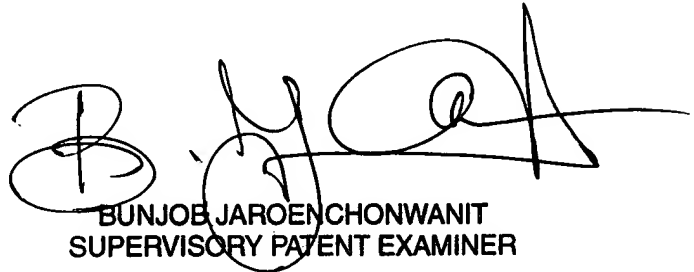
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dohm Chankong whose telephone number is 571.272.3942. The examiner can normally be reached on Monday-Thursday [7:00 AM to 5:00 PM].

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bunjob Jaroenchonwanit can be reached on 571.272.3913. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DC



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